

7. **Letter-telegrams.**—Commencing in February, 1914, the Postal Department instituted a system of letter-telegrams between all telegraph offices which are open between 7 p.m. and midnight. The letter-telegrams are forwarded during the night by telegraph to the office of destination and are delivered as ordinary letters by the first letter delivery, or are despatched by mail to the address in the ordinary way. The object of the Department in introducing the system was to utilize profitably the unoccupied time of the staff, but it was found that ordinary business and revenue suffered through the extensive use of the system by the business community, consequently the concession has been limited to messages of a social, domestic or private nature. Letter-telegrams may be exchanged between any of the following offices; (a) offices which are open for the receipt of ordinary business between 7 p.m. and midnight, (b) offices which are open for ordinary or press business after 7 p.m. The rates charged throughout the Commonwealth are one shilling and threepence for the first 30 words, and one halfpenny for each additional word, double these rates being charged on Sundays. At the end of 1921 the service applied to 103 offices throughout the Commonwealth.

8. **Wireless Telegraphy.**—Prior to September, 1915, the Postmaster-General was, under the Wireless Telegraphy Act 1905, given the exclusive privilege of establishing and using stations and appliances for receiving and transmitting messages by wireless telegraphy within Australia, and an amendment of the Act in 1919 extended the Commonwealth's control to wireless telephony also. Licences for experimental work are granted by the Postmaster-General under the authority of the Act. Licences are now issued (a) in respect of wireless telegraphy installations on ships registered in Australia; (b) in respect of experimental work carried out by amateur investigators into radio-phenomena generally.

The administration of the Radio Service was under the control of the Navy Department from September, 1915, to 1st July, 1920, when it reverted to the Postal Department, although the actual transfer was not effected until 28th October, 1920. Upon the resumption of control by the Postal Department, immediate action was taken to extend the uses of wireless both for inland and trans-ocean public requirements. The regulations were amended to permit of any person obtaining a licence to erect and operate his own station in remote localities not served by land lines. Where such stations were erected to the Department's satisfaction the Department undertook to provide communication with the landline system, and in furtherance of this policy it was proposed to erect collecting stations at Powell's Creek, N.T., and Camooweal, Q., to work in conjunction with private stations. Experimental work has been undertaken in connexion with wireless telephone transmission between Tasmania and the mainland of Australia, and the results so far obtained have been very promising.

On 28th March, 1922, the Commonwealth Government entered into an agreement with Amalgamated Wireless (Australasia) Limited whereby the Company agreed to establish and maintain direct wireless communication between Australia and the United Kingdom and Canada, and to take over from the Commonwealth Government the existing Radio Stations under its control. Under the terms of the agreement the Company is called upon to increase its capital to 1,000,000 shares of £1 each and to allot to the Commonwealth Government 500,001 shares after the expiration of one month from the date of the agreement. In the event of any further increase of capital it must be so arranged that the Commonwealth will always retain a controlling interest in the Company. The Company is not to become a party to any trust or combine and is always to remain a British concern. It is also required to hand over the control of the stations to the Government in time of war or public danger if considered desirable. Seven directors are provided for as follows:—Three to be nominated by and to represent the Commonwealth Government; three to be elected by holders of shares other than those allotted to the Commonwealth Government; and one to be elected by a majority vote of the other six directors. If the six directors are equally divided the selection of the seventh director is to be referred to one arbitrator mutually selected, or failing mutual selection, to be determined by arbitration under the Victorian Arbitration Act 1915.

In particular the Company forthwith undertakes the following programme :—

- (a) To construct, maintain and operate in Australia the necessary stations and equipment for a direct commercial wireless service between Australia and the United Kingdom.
- (b) To provide and operate a system of feeder stations for wireless connexion between the main high-power stations and the capital cities of the States.
- (c) To equip and organize the feeder stations so as to provide communication with merchant ships round the coast of Australia.
- (d) To arrange that the rates to be charged for messages between Australia and the United Kingdom shall not exceed the following :—Full-rate messages, 2s. per word ; deferred messages, 1s. per word ; week-end messages, 6d. per word (minimum, 10s. per message) ; Government messages, 1s. per word ; press messages, 5d. per word ; deferred press messages, 3d. per word.
- (e) To arrange for the operation of suitable corresponding stations in the United Kingdom.
- (f) To provide the main trunk stations in Australia and the United Kingdom within two years from date of agreement.
- (g) To arrange within two years from the date of the agreement for the erection and operation of a station in Canada capable of commercial communication with the high-power station in Australia, and so equipped as to afford facilities for distributing traffic throughout North America.
- (h) To take over within one month from date of agreement existing Commonwealth Radio Stations, excepting those wholly under control of Defence Department, but including stations in Papua, Territory of New Guinea, and Flinders and King Islands, and also, if required, Willis Islets Station, and to operate and provide a service at least equal to that previously supplied.

For the purposes of the agreement, the commercial wireless service means a service capable of maintaining communication throughout 300 days of every year on a minimum basis of twenty words a minute each way for twelve hours per day.

In preparing the initial scheme for the construction of wireless stations in the Commonwealth, it was evident, viewing the insular position of Australia, that, for an effective system of radio-telegraphic communication to be given, not only must the service offered be continuous, but the distances separating the stations must to a great extent be governed by the normal working range of the vessels with which communication would have to be established. With this object in view the Commonwealth Government has constructed and erected stations at or near the following localities :—Port Moresby, Thursday Island, Cooktown, Townsville, Rockhampton, Brisbane, Sydney, Flinders Island, Melbourne, Hobart, King Island, Adelaide, Esperance, Perth, Geraldton, Broome, Wyndham, Darwin, Samarai and Misima (Louisiade Archipelago). In the Pacific the Commonwealth controls stations at Rabaul, Madang, Nauru, Kieta, Bita Paka, Morobe, Eitape, Manus, and Kaewieng ; all these being on former German territory now administered by Australia. The stations at Sydney, Perth, and Townsville are of a medium-power type. All the other stations are of low power, and constitute the internal scheme of inter and ship-to-shore communication. The following rates are applicable to radio-telegrams transmitted either way :—Between any telegraph office in Australia and Australian ships, 6d. per word, allocated as follows : Coast station 3d., ship station 2d., landline 1d. British and foreign ships, 11d. per word, allocated : Coast station 6d., ship station 4d., landline 1d. Between the Commonwealth and Port Moresby the rate is 6d. per word, and between the mainland and Flinders Island or King Island 2s. 8d. for sixteen words, 2d. each additional word.

Radio-telegraphic stations have been erected at Suva, Ocean Island, Tulagi, and Vila under the control of the High Commissioner of the Pacific, while the New Zealand Government has erected high-power stations at Awanui (Auckland), Awarua (Bluff), and Apia (Samoa), and low-power stations at Auckland, Chatham Islands, Raratonga (Cook Islands), and Wellington.

### § 3. Submarine Cables.

1. **First Cable Communication with the Old World.**—In earlier issues of the Year Book will be found a detailed account of the connection of Australia with the old world by means of submarine cables. (See No. 6, p. 770.)

2. **The Tasmania-Victoria Cables.**—A submarine cable joining Tasmania to the continent of Australia was opened for use in 1869, the total length being 170 miles. The line was owned by the Eastern Extension Telegraph Company, and was subsidised by the Tasmanian Government until the year 1909. On the 28th February, 1908, the Postmaster-General entered into an agreement with Messrs. Siemens Brothers and Company Ltd., of London, for the manufacture and laying of two submarine cables between Tasmania and Victoria. The new cables were taken over on the 24th March, 1909, and opened to the public on the 1st May, 1909, the day following the expiration of the agreement with the Eastern Extension Company. Their aggregate length is approximately 350 nautical miles of main cable, and 20 nautical miles each of intermediate and shore-end cable, making a total of 390 nautical miles. The contract price was £52,447.

3. **The Eastern Extension Company's Cables.**—In addition to the first Victoria-Tasmania cable and the original cable from Darwin (see Year Book No. 6, p. 770), the Eastern Extension Company has constructed several other cables connecting with various places in the Commonwealth. (a) In 1879 the original cable via Banjoewangie was duplicated, the States of New South Wales, Victoria, South Australia, Western Australia, and Tasmania having agreed to pay the above company a subsidy of £32,400 per annum for a period of twenty years, the amount to be divided between the States on a population basis. (b) In 1881 a cable was constructed connecting Broome, in Roebuck Bay, W.A., with Banjoewangie, and remained in operation until 1914, in which year it was taken up. (c) In July, 1899, the company offered to lay a cable direct to Great Britain via the Cape of Good Hope, and also offered reductions in the rates charged, if the States would agree to certain conditions giving the company the right of direct dealing with the public. The States of South Australia, Western Australia, and Tasmania accepted the terms offered, and New South Wales entered into the agreement in January, 1901. The cable was opened via Fremantle and Durban in October, 1901. (d) Another submarine cable from Fremantle to Adelaide forms an alternative line of communication between the eastern States and Western Australia. (e) There is an alternative route, partly belonging to the Eastern Extension Company and connecting the Port Darwin-Singapore cable with London, via Hong Kong, Shanghai, Possiet Bay (Pacific Russia), Libau (Russian Baltic), and Newbiggin (England). (f) In 1909 a cable was laid from Java to Cocos Island, thus affording another route from Australia to South Africa, whilst in April, 1911, a radio-telegraphic station was opened at Cocos Island, thus strengthening the line of communication between Australia and the East.

4. **The Pacific Cable.**—In July, 1898, a conference of representatives of Great Britain, Canada, New South Wales, Victoria, Queensland, South Australia, and New Zealand was held for the purpose of considering a project for a cable to be laid across the